

**EPA Superfund
Explanation of Significant Differences**

**OUTBOARD MARINE CORPORATION
EPA ID: ILD000802827
OU3 (PCB Containment Cells)
WAUKEGAN, IL
June 8, 2009**

EXPLANATION OF SIGNIFICANT DIFFERENCES

PCB Containment Cells, Operable Unit #3
of the
Outboard Marine Corporation Superfund Site
Waukegan, IL

Brief summary: EPA is issuing an Explanation of Significant Differences (ESD) to the 1984 Record of Decision and the 1989 Record of Decision Amendment for the Outboard Marine Corporation (Waukegan Harbor operable unit) Superfund site. We are issuing the ESD to support a change in the projected future land use for one of the PCB containment cells that was created as a result of the 1990-1992 harbor cleanup action. Harbor Boat Slip #3 was converted into a PCB containment cell during the cleanup and no future use was planned for the land surface. Under this ESD, the surface of the containment cell may be re-engineered to support the placement of a boat storage building on top of the cell if the future operation and maintenance of the re-engineered cell continues to be performed in accordance with the provisions of the Supplemental Consent Decree (June 2005). Institutional controls will be recorded on the containment cell parcel to ensure that there would be no unauthorized disturbance of the remedy or incompatible future use of the land surface.

**Explanation of Significant Differences
Outboard Marine Corporation Superfund Site
Operable Unit #3**

I. Introduction

A. Site Name and Location

Outboard Marine Corporation, Waukegan, Illinois
Operable Unit Number Three (OU#3) – PCB Containment Cells

B. Identification of Lead and Support Agencies

Lead Agency: U.S. Environmental Protection Agency (EPA)
Support Agency: Illinois Environmental Protection Agency (Illinois EPA)

C. Statement of Purpose

This decision document sets forth the basis for EPA's determination to issue an Explanation of Significant Differences (ESD) to the March 15, 1984, Record of Decision (ROD) as amended by the March 31, 1989, ROD Amendment (ROD/ROD Amendment) for the Waukegan Harbor site, which is OU#1 of the Outboard Marine Corporation (OMC) National Priorities List (NPL) site, Waukegan, IL. OMC conducted a remedial action, which EPA had selected in the 1984 ROD and 1989 ROD Amendment, in the harbor from 1990-1992 and created three on-site PCB containment cells as a part of the clean up action. EPA now manages the PCB containment cells as a separate operable unit (OU#3) within the OMC site. This ESD applies to one of the three PCB containment cells in OU#3.

D. Statutory Basis for Issuance of the ESD

Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)¹ states that EPA shall publish an explanation of the significant differences between the remedial action being undertaken at a site and the remedial action set forth in the Record of Decision (ROD) if we determine that the remedial action at the site differs significantly from the ROD remedial action. We shall also publish the reasons such changes are being made. EPA policy and regulations² indicate that an ESD, rather than a ROD Amendment, is appropriate where the changes being made to the remedial action are significant but do not fundamentally alter the overall remedy with respect to scope, performance, or cost.

¹ 42 U.S.C. § 9617(c)

² See 40 CFR 300.435(c)(2)(i) (National Contingency Plan); EPA Office of Solid Waste and Emergency Response Directive 9355.3-02

E. Summary of Circumstances Necessitating this ESD

The City of Waukegan (City) obtained title to thirteen abandoned parcels comprising a large portion of the OMC Superfund site in September 2005. These properties included the OMC Plant 2 site (OU #4) and the three PCB containment cells (OU #3). The City then began to conduct operation, maintenance and monitoring tasks on the cells in accordance with the provisions of the Supplemental Consent Decree (June 2005) it had entered into with EPA and Illinois EPA. In November 2006, the City requested that EPA approve the City's proposed change to the projected future land use assumption for former Boat Slip #3, one of the three PCB containment cells, because the City wished to use the surface of the cell to accommodate its redevelopment plans for the OMC site area. The City proposed to re-engineer or reconfigure the surface of the PCB containment cell to allow for construction of a boat storage building on top of the cell for use by Larsen Marine Service (Larsen). Larsen previously had operated its marina business out of Boat Slip #3 and currently operates out of an adjacent boat slip.

EPA's review of the 1984 ROD and the 1989 ROD Amendment for the OMC Site finds that neither document explicitly discusses future land use requirements, assumptions, or prohibitions for the three PCB containment cells. However, EPA believes that these decision documents implicitly state that the PCB containment cells are not to be disturbed because they present the requirement to conduct operation, maintenance, and monitoring (OM&M) on the cells. EPA and Illinois EPA agreed to consider the City's request to reconfigure one of the PCB containment cells to allow Larsen to build a boat storage building on top; thus, EPA determined that we should issue a decision document for the site in which to approve and document the conditions for the City to be able to re-use the cell. The changes to the ROD/ROD Amendment are discussed in Section III, below.

F. Agency Determination

EPA, in consultation with Illinois EPA, has reviewed the proposed changes to the OMC Site ROD/ROD Amendment remedial action in accordance with CERCLA and EPA policy and guidance. We have determined that the proposed changes to the ROD/ROD Amendment remedial action are significant but do not fundamentally alter the overall site remedial action with respect to scope, performance, or cost. Thus, we find that it is appropriate that we issue an ESD to document the changes.

G. Administrative Record

In accordance with Section 300.825(a)(2) of the National Contingency Plan (NCP), this ESD and supporting documentation will become part of the Administrative Record for the OMC site.

The OMC site Administrative Record is available for public review at the following locations:

EPA Region 5 Records Center
77 W. Jackson Blvd. - 7th Floor
Chicago, IL 60604
8 a.m.-4 p.m. M-F

Waukegan Public Library
128 N. County St.
Waukegan, IL 60085
9 a.m.-9 p.m. M-Th, 9-6 F

II. Location and Site History, Contaminants, and Selected Remedy

A short summary of OMC site conditions is presented below. EPA encourages the reader to examine the OMC site Administrative Record file for more specific site details, including the 1984 ROD and 1989 ROD Amendment for OU #1. The ROD documents may also be found at <http://www.epa.gov/superfund/sites/rods>.

A. Location and Site History

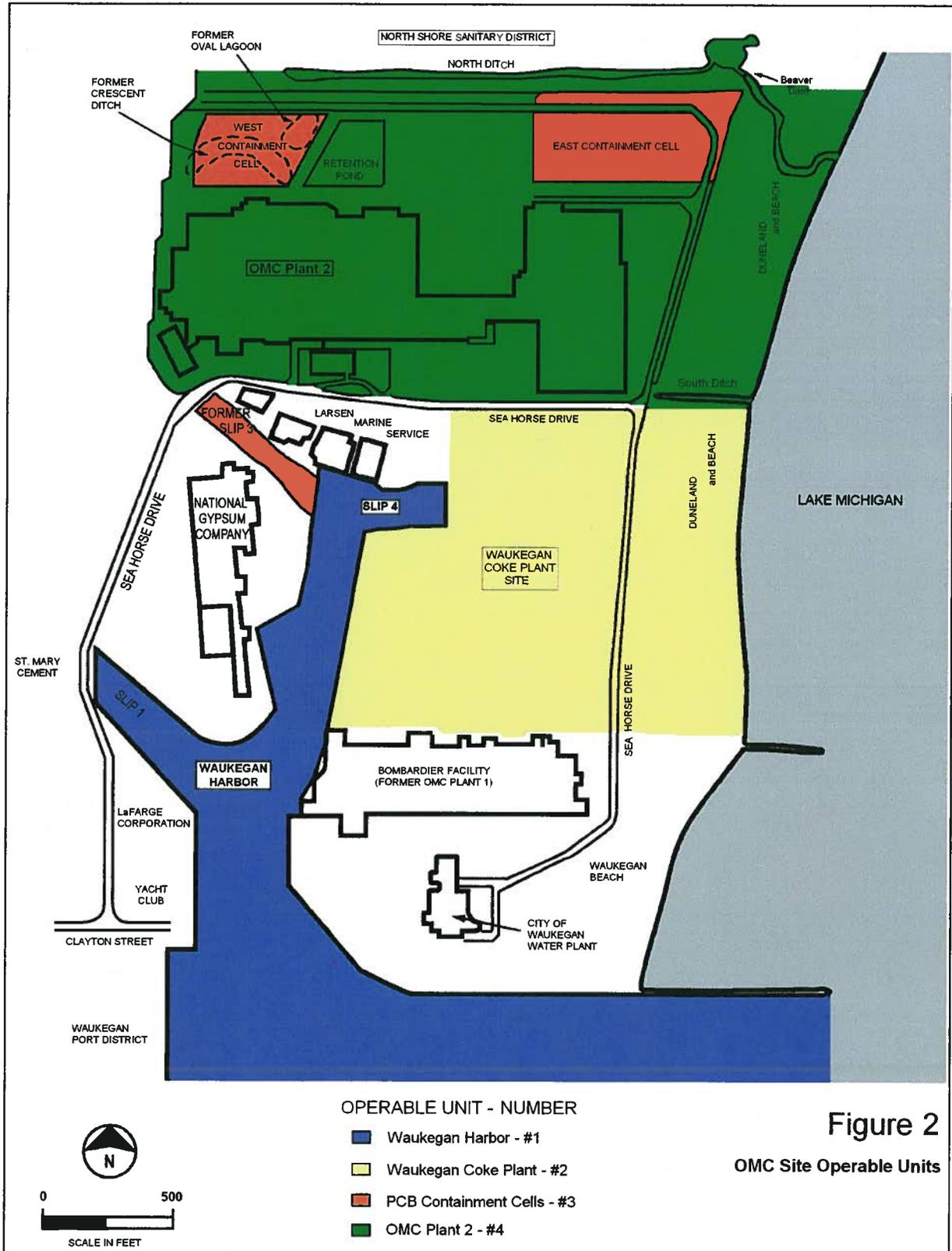
The OMC Superfund site is located at 90 Sea Horse Drive in Waukegan, Illinois, about 40 miles north of Chicago (see Figure 1). The site contains four operable units which include the Waukegan Harbor site (OU #1), the Waukegan Manufactured Gas and Coke Plant ("Waukegan Coke Plant") site (OU #2), the three PCB Containment Cells (OU #3), and the OMC Plant 2 site (OU #4) (see Figure 2).

The OMC Plant 2 site (OU#4) is a 60-acre lakefront parcel that contains an abandoned 1,060,000 square-foot industrial facility in which OMC manufactured outboard motors from about 1948 until 2000. The facility used polychlorinated biphenyl (PCB)-containing hydraulic and lubricating oils in its production lines beginning in 1961 until 1972 and routinely discharged some of the fluids via sewer lines into Waukegan Harbor, thereby becoming the source of very high level PCB contamination in harbor sediment. Harbor-caught fish have become contaminated with PCBs as a result.

OMC declared bankruptcy in December 2000 and ceased operations in August 2001.

B. Contaminants and Selected Remedy

EPA issued a ROD in 1984 to clean up Waukegan Harbor sediment after documenting high PCB contaminant levels in the sediment as well as on the OMC Plant 2 facility grounds. We reached an agreement with OMC in a consent decree (CD) in 1988 under which OMC was to perform the cleanup actions selected in the 1984 ROD. After completing the remedial design and EPA issued a ROD Amendment in 1989 to modify the 1984 cleanup approach, OMC cleaned up Waukegan Harbor in 1990-92 by dredging the north harbor area to achieve a 50 milligram per kilogram (mg/kg or "parts per million" (ppm)) PCB cleanup level. OMC converted harbor Boat Slip #3 into a PCB containment cell and placed some of the dredged material into the former slip (see Figure 2). Sediment containing greater than 500 ppm PCBs was thermally treated to



remove PCB oil for off-site destruction. Over 30,000 gallons of PCB oil were recovered.

OMC also excavated PCB-laden soils on the north side of its OMC Plant 2 property to achieve the 50 ppm PCB cleanup level and placed these soils into two newly created PCB containment cells ("west containment cell" and "east containment cell" – see Figure 2) located on the north side its OMC Plant 2 facility. Treated harbor sediment was also placed into the west and east containment cells. The estimated cost of performing the selected remedial action in 1990-92 was \$21 million, including future O&M costs.

OMC converted Boat Slip #3 into a PCB containment cell by installing a double sheet-pile wall across the mouth of the slip and placing a bentonite slurry wall between the sheet-pile walls. A bentonite slurry wall was also installed around the rest of the perimeter of the slip. The sheet pile and slurry walls were keyed into a thick, very tight glacial till layer about 25 feet below ground surface. The slip was dewatered, filled with PCB-laden sediment, and then covered with a layer of clean sand, a 60-mil HDPE liner, a geotextile drainage layer, and two feet of soil and top soil. OMC installed two pumping wells in the cell so that groundwater could be periodically removed to create an inward hydraulic gradient. The east and west containment cells were similarly constructed.

OMC conducted the OM&M tasks on the three PCB containment cells from 1993 until the U.S. Bankruptcy Trustee (Trustee) was allowed to abandon OMC's Waukegan facilities (including the OMC Plant 2 site) in December 2002. The OM&M tasks are now conducted by the City. For the Boat Slip #3 cell, the City periodically pumps groundwater from the cell and treats it using activated carbon to remove any dissolved PCBs before discharging the treated water to Waukegan Harbor; inspects the cover and fixes animal burrows as necessary; and mows the grass on the cover. The City also takes water level measurements in the pumping wells and several adjacent monitor wells to demonstrate an inward hydraulic gradient and it also samples the wells once a quarter to determine whether or not PCBs are escaping the cells via the groundwater. To date, the cells have performed as designed.

III. Basis for the ESD

When EPA selected the OMC (Waukegan Harbor) site remedial action in 1984, OMC, the site owner, was an operating and viable corporate entity. Accordingly, in compliance with the 1988 CD, OMC took charge of the OM&M of the newly created PCB containment cells on its properties until it later declared bankruptcy. The Trustee then, pursuant to EPA oversight and agreement, either sold off or abandoned all of OMC's property holdings in Waukegan. The City purchased the Waukegan Coke Plant site property from the Trustee in July 2001 and in September 2005 it assumed title to the abandoned OMC Plant 2 properties, including the three PCB containment cells. The City, as the new site owner, later indicated that it wanted to redevelop all the former OMC properties for mixed commercial, residential and marina-related uses ("mixed use") in accordance with its lakefront-wide redevelopment plan (see Figure 3).

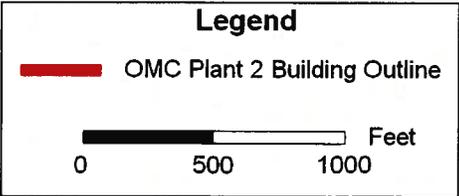


Figure 3
Waukegan's Master Plan for
Harborfront and North Harbor
Development Districts

Source: Waukegan Lakefront-Downtown Master Plan/Urban Design Plan
(Skidmore, Owings & Merrill LLP, June 23, 2003)

OMC Site Vicinity

To develop the mixed use redevelopment plan for the area, in November 2006 the City proposed to EPA that the City would lease the Boat Slip #3 containment cell to Larsen so that Larsen may build a boat-storage facility on the cell thereby allowing Larsen to expand its business. Accordingly, the City produced a basis of design plan (30 percent design) to modify the surface contours of the Slip #3 cell to allow for construction of a suitable building by Larsen and submitted the plan to EPA and Illinois EPA for the Agencies' consideration. The 30 percent design also included engineering calculations that demonstrated that a building could be safely constructed on top of the cell without impacting the efficacy of the containment features (slurry wall, cap). Upon Agency consideration and comment, the City later submitted a pre-final (90 percent) design plan to EPA and Illinois EPA for review and comment.

The City submitted its final (100 percent) design plan in October 2008 to EPA and Illinois EPA for approval. After consultation with Illinois EPA, EPA informed the City that we had no further technical concerns with its plans. Our review showed that the Slip #3 PCB containment cell could be safely modified to remove the slope (which currently promotes surface run-off of precipitation) in a targeted area to allow for the construction of a suitable building on top of the cell. Also, the City could still conduct the protective OM&M tasks on the containment cell below. EPA and Illinois EPA agreed that there would likely be no impact on the contents of the Slip #3 containment cell if the building was constructed in accordance with the City's plans. In addition, there are no vapor intrusion issues identified with the Boat Slip #3 containment cell.

IV. Significant Difference to the ROD/ROD Amendment Remedial Action

The City assumed title to the OMC Plant 2 property in 2005 and, as the new owner, indicated that it wants to redevelop the property for mixed use in accordance with its lakefront redevelopment plans. A portion of the redevelopment plan was later modified to include the re-engineer the Boat Slip #3 PCB containment cell to accommodate Larsen's re-use of the property; however, the ROD/ROD Amendment did not explicitly consider the future use of the PCB containment cells. EPA, in consultation with Illinois EPA, evaluated the mixed-use scenario with respect to additional remedial components that could be performed at the Boat Slip #3 containment cell to afford the City's plans for Larsen to build on top of the cell. EPA has determined that the following additional remedial components are necessary to re-use the Boat Slip #3 containment cell:

- Reconstruct the surface of the Boat Slip #3 containment cell in accordance with the City's basis of design (30 percent design) submittal, as modified in the EPA-approved 90 percent and 100 percent design submittals (Appendix 1);
- Place institutional controls on the cell in accordance with the Supplemental Consent Decree and as contemplated in Appendix 2; and,
- Conduct OM&M on the reconfigured containment cell in accordance with the Supplemental Consent Decree and the approved design submittals.

During the reconstruction of the Boat Slip #3 containment cell, the City will be excavating soil or sand from beneath the cover but above the contaminated sediment

layer and disposing of it off-site. The excavated material will be tested for PCB content, if any, to verify proper disposal methods. EPA shall oversee all construction and OM&M work.

The City's planned Boat Slip #3 construction work will not impact expected cleanup times or remedial action objectives for any of the operable units of the OMC site. The PCB containment cells are operating as designed and will continue to do so after the City's changes are made to Boat Slip #3.

V. Support Agency Comments

Illinois EPA has indicated that it generally concurs with the ESD and that a concurrence letter is forthcoming. EPA will place the concurrence letter into the OMC site Administrative Record upon receipt.

VI. Statutory Determinations

EPA has determined that with the changes we have made to the OMC site ROD/ROD Amendment future land use assumptions in this ESD, in accordance with CERCLA Section 121, the selected remedial action for the OMC site is protective of human health and the environment. It also complies with federal and state requirements that are applicable or relevant and appropriate, uses permanent solutions to the maximum extent practicable, and is cost-effective. The OMC site is subject to Five-Year Reviews of the site remedies to ensure protectiveness and this ESD does not change that provision with regard to the City's reconstruction of the Boat Slip #3 containment cell.

VII. Public Participation Compliance

EPA shall publish a notice of availability and a brief description of this ESD in the local newspaper as required by the NCP, at Section 300.435(c)(2)(i)(B). We will also place this ESD into the Administrative Record file and information repository located at the Waukegan Public Library as required by the NCP, at Section 300.435.(c)(2)(i)(A).

VIII. Declaration

EPA has determined that the adjustments to the OMC site ROD/ROD Amendment provided in this ESD are significant but do not fundamentally alter the overall site remedial action with respect to scope, performance, or cost. I therefore approve the issuance of this ESD for the OMC site and the changes to the remedial action stated herein.



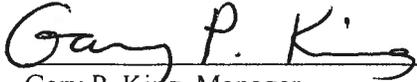
for Richard C. Karl, Director
Superfund Division
U.S. EPA Region 5



Date

IX. Declaration by IEPA

IEPA has determined that the adjustments to the OMC site ROD/ROD Amendment provided in this ESD are significant but do not fundamentally alter the overall site remedial action with respect to scope, performance, or cost. I therefore approve the issuance of this ESD for the OMC site and the changes to the remedial action stated herein.

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Gary P. King, Manager
Division of Remediation Management
Illinois Environmental Protection Agency

_____ 6/3/09
Date

Appendix 1

30% Basis of Design for Re-use of Slip #3 PCB Containment Cell

90%/100% Design for Re-use of Slip #3 PCB Containment Cell

Note:

The 30%, 90% and 100% design submittals are incorporated by reference and are available in the OMC site Administrative Record.

Appendix 2

Institutional Controls

The Supplemental Consent Decree (June 2005) contains the following terms concerning institutional controls (ICs) for the OMC Plant 2 site and for the PCB Containment Cells:

VIII. ACCESS/INSTITUTIONAL CONTROLS

19. *Commencing on the date that it acquires title to the Property, the City of Waukegan shall refrain from using the Site, or the Property, in any manner that would interfere with or adversely affect the implementation, integrity, or protectiveness of the remedial measures that have been or are to be performed on any portion of the Site or the Property, including remedial measures under the ROD, and any other response actions selected by EPA and the Illinois EPA for the Site or the Property. The City of Waukegan shall: (1) abide by any institutional controls including, but not limited to, land/water use restrictions that may be applicable to the Site or the Property; and (2) provide notice to EPA and Illinois EPA thirty (30) days prior to the demolition or significant alteration of any structure on the Property, or significant alteration of the topography of the Property.*

20. *If EPA or the State determines that land/water use restrictions in the form of State or local laws, regulations, ordinances or other governmental controls are needed to implement the remedy selected in the ROD, ensure the integrity and protectiveness thereof, or ensure non-interference therewith, the City of Waukegan shall cooperate with EPA's and the State's efforts to secure such governmental controls. Nothing herein shall preclude the City from (1) seeking the enhancement of any remedial measures selected by EPA in any record of decision pursuant to Section 121 of CERCLA at the Property, (2) enacting or adopting plans or ordinances which do not conflict with any record of decision at the Property, or (3) seeking any appropriate review of any remedial measures selected by EPA in a record of decision at the Property as provided by law.*

EPA, in consultation with Illinois EPA, has determined that the following site-use restrictions are applicable to the Boat Slip #3 PCB containment cell, following its reconstruction for re-use:

1. No disturbance of the soil cover and soils beneath the cover.
2. No interference with the implementation of the site cleanup remedy.
3. Restrictions on future land uses, in that the property shall not be used for:
 - a. residential purposes;
 - b. a hospital for humans;
 - c. public or private schools;
 - d. a day care center for children;
 - e. any purpose that involves occupancy on a 24-hour basis;
 - f. any use that would penetrate the soil cover;
 - g. any use that is prohibited by City ordinance; and
 - h. any use prohibited by the Supplemental Consent Decree.
4. No use of groundwater unless approved by EPA and Illinois EPA.
5. No building construction unless approved by EPA and Illinois EPA.

The City of Waukegan will record the ICs on the property deed at the Lake County Recorder's Office. The City also has granted a permanent environmental easement to EPA and Illinois EPA to access the site to ensure that the cleanup remedy is being performed in accordance with the Supplemental Consent Decree and that the ICs are being adhered to by the property owner. EPA and Illinois EPA have enforcement authority in the Supplemental Consent Decree to ensure that the ICs are being followed.